Managed care schemes in dentistry - the situation in H.K.

Group 5.3 00/01

CHEUNG Man Fei

KAM Yuk Lun

KUO Ka Kwan, David

KWOK Lap Wah

LEUNG Wing See

SIU Yee Wah

TSUI Wing Kei, Vicky

YIP Wai Tong

Advisor :

Dr. E.C.M. Lo

Table of contents

1. ABSTRACT

There are many kinds of managed health care schemes and Health Maintenance Organization (HMO) is one of the most well-known. HMO is a third party organization that offers pre-payment health care plans for the consumers to purchase and the services are provided by a panel of pre-selected health care providers. Recently, HMO develops rapidly in Hong Kong but its role in the local dental care system is controversial. The objectives of this study were to describe the running of dental managed health care schemes, in particular HMO, in Hong Kong and to describe the private dentists' and the consumers' opinions.

Information about dental managed care schemes in Hong Kong was collected from newspapers, the dental literature and interviews with dentists and a dental company. A questionnaire survey of 120 private dentists was conducted by mail. Another survey of consumers was conducted on 115 employees of six companies which had purchased dental plans for their employees as a fringe benefit.

Study findings showed that most of the respondents were satisfied with the dental services they received. They also reported an improvement in their dental visit behaviour, oral health knowledge and perceived oral health status after joining their dental plan. From the consumers' point of view, managed care scheme seems to be beneficial and worth promoting. As for the dentists surveyed, it was found that different views were held by the dentists who were associated with HMO and those who were not, regarding whether managed care schemes were beneficial to the public and whether the regulations on these schemes were adequate or not. The two groups of dentists also differed in their opinions as to whether the Hong Kong Dental Council and the government should play a more active role in monitoring HMO companies.

It is recommend that a working group, comprising representatives from the dental profession, the regulatory body, the health care business sector and the government be established in Hong Kong to investigate the need for tightening the regulations on dental managed care schemes. Furthermore, there should be more communications between the dental profession and the dental companies so as to improve mutual understanding and to reduce conflicts.

2. INTRODUCTION

There are many kinds of managed care schemes in the health care business and Health Maintenance Organization (HMO) is one of the most well-known (Gift et al. 1997, Burt & Eklund 1999). This is a kind of third party payment arrangement in health care. The HMO is a third party organization that offers pre-payment health care plans for the consumers (the first party) to purchase. The health care providers (the second party) are pre-selected by the HMO and they serve the people who have joined the health care plans offered by the HMO. The HMO may seem like a traditional health insurance company but in fact, there are many differences between them.

In the health care plans offered by a traditional insurance company, the company usually reimburses the consumer in whole or in part for what he or she has spent on health care services, or pays the care provider directly for the services rendered (Bailit 1999). There is usually no restriction in the consumer's choice of care providers. The arrangements in the plans offered by HMO are different from the above. An HMO company first employs and/or recruits health care providers to join their plans. A list of panel care providers will then be issued to the consumers who purchase its plans. The consumer can seek care from the panel of providers with no or a little additional cost. If the consumer seeks care from a provider not included in the panel, then he or she may have to pay the total cost. This is a major distinction between HMO and traditional insurance company. An insurance company usually does not have close relationship with any particular care provider and it provides its clients with a freedom to choose their own care providers. In the case of a HMO company, care providers in the panel have contracts with the company and they are obliged to follow the terms and rules in the contract. In other words, both the care providers and the consumers have limited choices and they meet each other through a third party, the HMO company, which has control over their behaviours.

Traditionally, a patient receives health care services from a provider and pays the provider directly. This is the direct fee-for-service arrangement (Bailit 1999). In the case of HMO, a consumer purchases a package plan from the HMO that covers certain types of health care services. A premium is paid to the HMO company before the consumer seeks services. When he or she receives care from the panel of providers, no additional direct payment is necessary. The care provider in this case receives payment from the HMO

company. However, the situation may be complicated by various forms of payment arrangements such as co-payment, in which the company only covers a certain percentage of the cost of treatment and the consumer or provider is responsible for the rest (Guay 1995, Marcus et al. 1995).

For a private HMO that aims at making a profit, the money paid by the consumers will end up in at least a three way split, one part to the HMO staff for running the company, one part to the HMO shareholders as their investment return, and only part of the money goes to the care providers for their service. Although this may seem to increase the financial burden of the consumers, this is not always the case. The HMO company, acting as a bulk purchaser of health care services, is in a strong position to negotiate with the providers and to implement cost containment strategies. In many cases, the HMO companies provide plans at an attractive price that seems like a bargain to the consumer. It is said that HMO companies can improve public's access to health care services by lowering the financial barrier.

The development of managed care and HMO can be traced back to the 1970s in the U.S.A. (Guay 1995, Leake 1998, Burt & Eklund 1999). At that time, due to a rapid rise in medical expenses in the United States, the idea of establishing HMOs in order to control the medical expenditure was promoted. At the beginning, the HMO companies were able to provide a variety of medical services at a low cost and the coverage of services in their plans was good. They were thus widely accepted by the government and the public. However, people did not fancy them for long. The negative sides of HMO were gradually realized by the public. The limited choice of care providers, quality of services provided, lack of regulations, exclusion of expensive drugs and treatment from the plans in order to gain maximum profit, dominance of market, over-reduction in prices due to competition between HMOs, and so on have all raised public concerns (Marcus et al. 1995, Brown & Bauer 1998, Call 1999). Now there are lawsuits against their practices in the United States and many states are establishing laws to restrict their operations. In fact, many managed health care companies in the U.S.A. have closed down.

Development of HMO in dentistry follows that in general health care and the arrangements of dental plans are similar to those in other plans (Clouse 1999). In Hong Kong, HMO companies do not have a long history and their involvement in dentistry is rather recent. Despite this, over the past few years HMOs develop rapidly and have become rather

popular in Hong Kong and some companies are now listed in the public stock market. At present, there is no specific law in Hong Kong to regulate the operation of HMO companies. The only regulation is the code of ethical behaviour in the various health care professions such as that in dentistry (Hong Kong Dental Council 2000).

There are claims that managed care schemes can increase the public's utilization of dental services by reducing the financial barrier, increase the public's awareness of oral health, and bring more patients into dentists' practices (Marcus et al. 1995). However, due to the recent emergence of HMO and other kinds of managed care schemes in Hong Kong, their pitfalls may not be apparent at this stage. The many problems associated with HMO in other countries (Brown & Bauer 1998, Call 1999, Chiodo & Tolle 1999) may also occur in Hong Kong and affect the dental profession. Thus, our group of students decided to conduct a study on the dental HMO companies in Hong Kong so as to obtain a better understanding of the current situation.

3. OBJECTIVES

The objectives of this study were:

1. to describe the running of managed health care schemes, in particular HMO, in Hong Kong dentistry;
2. to describe the private dentists' opinions on HMO; and
3. to describe the consumers' experiences with and opinions on dental managed care schemes.

4. MATERIALS AND METHODS

4.1. Collection of information about dental HMO in Hong Kong

As little information about dental HMO companies in Hong Kong was readily available, a search on the internet and electronic literature database was performed. Newspaper cutting of news and columns on local HMO companies and eminent local persons' views on HMO were gathered. Information was also collected through informal discussions with many private dentists, some had associations with a HMO company and some had not.

Publicity materials produced by various local companies involved in the provision of dental care services and information of the dental plans offered by the companies were collected. Letters explaining the purpose of our project and asking for a meeting with the managers were sent to five dental companies in Hong Kong. These were:

1. Health and Care Dental Clinic Ltd.
2. Union Concordia Medical Group
3. Town Health
4. Quality Health Care
5. Entire Health Care Services Ltd.

Phone calls were made to the companies to ensure the receipt of the letter. One of the companies responded to our request and a meeting with the manager who was also a dentist was held in his office. The meeting was tape-recorded and valuable information about the operation of dental companies in Hong Kong was obtained.

4.2. Collection of information from private dentists

In order to collect information on the local private dentists' opinions on the HMO companies, a questionnaire survey was conducted. Two questionnaires were constructed for this survey, one for dentists associated with HMO and another for dentists who were not (Appendices 1 and 2). To encourage the dentists to answer honestly, the questionnaires were anonymous. Only 15-18 questions were asked and most of them were in multiple choice form

so that the dentists could complete the questionnaire easily. There were a few open-ended questions and space was provided for the dentists to write down their opinions.

The draft questionnaires were pilot tested before final adoption. The purpose of the pilot test was to find out whether the questions could be easily understood and were without ambiguity, and whether the answer options provided could generate sufficient information. A few private dentists who were also part-time teachers in the Faculty of Dentistry were invited to participate in the pilot test. Two of them were known to be associated with a HMO company and another one did not. These dentists were excluded from the main survey. Some modifications to the questions were made after the pilot test and the questionnaires were finalized.

A purposive sample of 120 private dentists was selected on the advice of some part-time teachers of the Faculty of Dentistry. Some of the selected dentists were known to be associated with HMO companies and some were known to be not. The status of most selected dentists was unknown. The following set of materials was sent to each of the selected dentist by mail:

1. A cover letter explaining the purpose of the study
2. A questionnaire for dentists associated with HMO companies
3. A questionnaire for dentists not associated with HMO companies
4. A stamped addressed envelope

The dentists were instructed to fill in only one of the two questionnaires according to their current association with HMO companies and to return the completed questionnaire in the envelop provided. They were assured that the questionnaires were anonymous and that they should not write down their name on the questionnaire. Telephone calls were made to the selected dentists one week after the questionnaires were sent out. The purpose of the telephone follow-up was to confirm that the dentists had received the questionnaires and to encourage them to respond to the survey.

4.3. Collection of information from consumers

In order to collect information on the consumers' experiences with and opinions on the dental care services they obtained under managed health care plans, a questionnaire survey was conducted. The consumers in this survey were employees covered by dental benefit plans provided by the companies in which they worked and that these plans were run by HMO companies in Hong Kong.

A questionnaire containing 20 questions was specially constructed for this survey (Appendix 3). The questions were on the subject's dental visit behaviour, experience with the dental visits and opinion on the dental plan. All but one of the questions were in multiple choice form so that the subjects could complete the questionnaire easily. The only open-ended question asked the subjects to write down the aspects of the dental plan with which they were dissatisfied. In order to encourage the subjects to answer honestly, the questionnaire was anonymous.

The draft questionnaire underwent two rounds of pilot testing before final adoption. This was done to ensure that the questions could be easily understood and the answer options provided could generate sufficient information. The questions were modified after each round of pilot testing.

A purposive sample of six private companies in different sectors was selected for the survey. These were Price Waterhouse Coopers, Arthur Anderson, Shangri-La Hotels, Cathay Pacific Airways, Mazda Motors, and Grand Stanford Hotels. All these companies were known to have purchased dental plans offered by HMO companies. Assistance from the selected companies was sought to distribute the questionnaires as randomly as possible to their employees and to collect the completed questionnaires. A total of 115 questionnaires were distributed in the six companies.

4.4. Data analysis

Information in the returned questionnaires from both the dentist and the consumer surveys was coded and entered into a personal computer. Proof reading of the printed files was carried out and errors were corrected before data analysis. Data analysis was carried out using the statistical software Excel and SPSS.

5. RESULTS

5.1. Dental companies in Hong Kong

From our search on the internet and electronic literature database, some articles about managed care schemes and HMOs in the United States were found. However, the search on local articles on managed care or HMO gave a nil response. The following information was gathered from the discussions we had with a number of private dentists, the meeting with the manager of a local dental company, and the various materials from the local dental companies.

There are currently more than 10 dental companies in Hong Kong offering dental plans which can be considered as managed care schemes. This list of dental companies includes Bailey and Jackson, Well-being Service Ltd., Entire Health Care Service Ltd., Health and Care Dental Service, Quality Health Care, Town Health, Premier Medicare Care Service, and Union Concordia Medical Group. They offer different dental plans for the consumers to choose. Their main clients are organizations and companies that are interested in providing dental benefit to their members or employees, and not individual persons. From the materials gathered, the content of the various plans seems rather similar. The plans all covered check-up, x-rays, scaling and polishing, fillings for treating caries, simple extractions and simple emergency treatments. There were maximum numbers for certain types of treatment in some plans. It was noted that dental restorations not for caries treatment, e.g. replacing old fillings, abrasion lesions and for cosmetic reasons, were not included. Dental procedures requiring longer treatment time, e.g. endodontics and surgical extraction, and

dental prosthesis were also excluded. The annual premium of the plans ranged from about $300 to $450. Examples of the dental plans are shown in Appendix 4.

The dental companies recruit their panel of dentists in various ways. Sometimes they employ their own dentists, either full time or part-time. Sometimes they make contracts with independent dentists and refer their clients to these contracted dentists.

The dental companies usually have their own system of handling consumer complaints. Some companies keep a central file of all the complaints against their dentists as a reference. Some companies also take measures to improve the quality of care such as encouraging their staff to attend continue education courses and implementing a monitor system. However, when there are medico-legal issues or law suits against their panel of dentists, the companies will usually just ask the involved dentists to seek assistance from their own medical protection associations. It seems that the dentists will have to carry the full legal liability for their behaviours and the dental companies will not share this burden.

5.2. Opinions of eminent local persons published in newspapers

Local newspaper columns about HMO published in November 1999 to August 2000 were reviewed. The following web site www.wisers.com was found to be quite helpful. The more important ones were:

1. Dr. Leong Che-hung, the Legislative Council member representing the medical and dental professions, said that the Hong Kong government should follow the action of the Malaysian government which has specified in law that HMO cannot control a doctor's professional autonomy in exercising his/her expertise in serving patients. (Hong Kong Standard 2000-3-4)

2. Dr. Jones Fok Kin-chung, chairman and chief executive of Health Care International Operations suggested that government should set up guidelines for HMO to ensure a transparent mechanism. (Hong Kong Standard 2000-5-8)

3. Dr. Lo Wing Lok, president of the Hong Kong Medical Association, suggested that guidelines should be set up by the government to monitor HMO and to ensure transparency. (Hong Kong Standard 2000-5-8)

4. Dr. Peter Ting-wing Siu, a partner of Asia Medinet, rejected the saying that there was inadequate public supervision of the operation of HMO and said that his company regularly held meetings with different firms to keep the consumers well informed. (Hong Kong Standard 2000-5-8)

5.3. Survey of private dentists

A total of 120 questionnaires were sent out and 70 completed questionnaires were returned. Thus, the response rate was 58.3%. Among the 70 returned questionnaires, 19 were from dentists who were associated with HMO companies (HMO-dentists) and 51 were from dentists who were not (non-HMO-dentists).

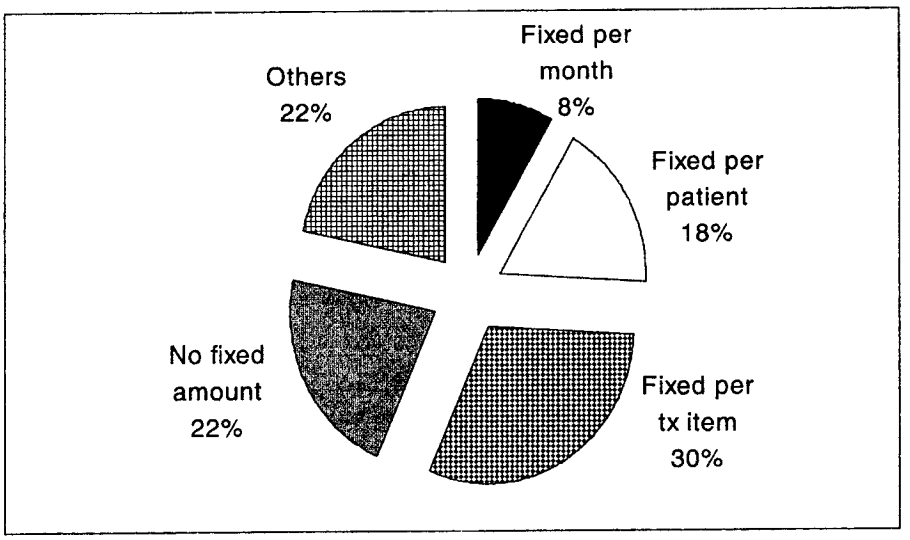
It was found that the non-HMO-dentists had practised dentistry for a longer time than the HMO-dentists in this survey, the mean number of years in practice were 11.3 and 5.1 respectively ($p<0.001$).

Over 90% of the non-HMO-dentists reported that they have heard about HMO and about half of them had been approached by HMO companies. Their main reasons for not joining a HMO company included unattractive remuneration, management hassles, less clinical freedom, difficulty in maintaining quality, unprofessional conduct, and poor reputation of HMO companies. About 60% of the non-HMO-dentists thought that there would be a significant increase in the number of patients after a dentist joined a HMO company. More than half of them thought that the growth of HMO in Hong Kong would threaten their dental practice and half of them would adjust their treatment charge scheme to increase their competitiveness in the dental care market.

Most of the HMO-dentists in this survey, 84%, were associated with only one HMO company. The mean number of years they were associated with a HMO company was 2.3. They were approached by the HMO companies via different means, the common ones

included recruitment advertisement in Hong Kong Dental Association Newsletter (42%), telephone calls (21%), representatives coming into their offices (10%), and through a friend or third party (6%). Some dentists became associated with HMO because they were employed by a HMO company or by another private dentist who had contracts with HMO companies.

Fig. 1 Ways through which the HMO-dentists were paid for their service.



There were many methods through which the HMO-dentists in this survey received payment from the HMO companies for the services they provided to the HMO covered patients. About one-third of them received a fixed amount per treatment item delivered, 18% received a fixed amount per patient treated and another 22% used multiple formulae such that there was no fixed amount (Fig. 1). The vast majority of the HMO-dentists, 84%, stated that there was an increase in their income after joining the dental HMO companies.

About half of the HMO-dentists indicated that at least 25% of their current patients were HMO patients (Fig. 2) and they used about 25% of their clinical time on treating the HMO patients. The HMO patients they treated usually required dental check-up, scaling, simple restorations, extraction and dental prosthesis. When asked which group of patients they thought was better, more than 60% of the HMO-dentists replied that non-HMO patients were better, and 30% of them replied that the two groups were similar. Two-thirds of the

HMO-dentists indicated that there was no change in their job satisfaction after joining the HMOs and the other one-third indicated that it got worse. In fact, no respondent replied that they had better job satisfaction after joining the HMOs.

Fig. 2 Proportion of patients coming from HMO company

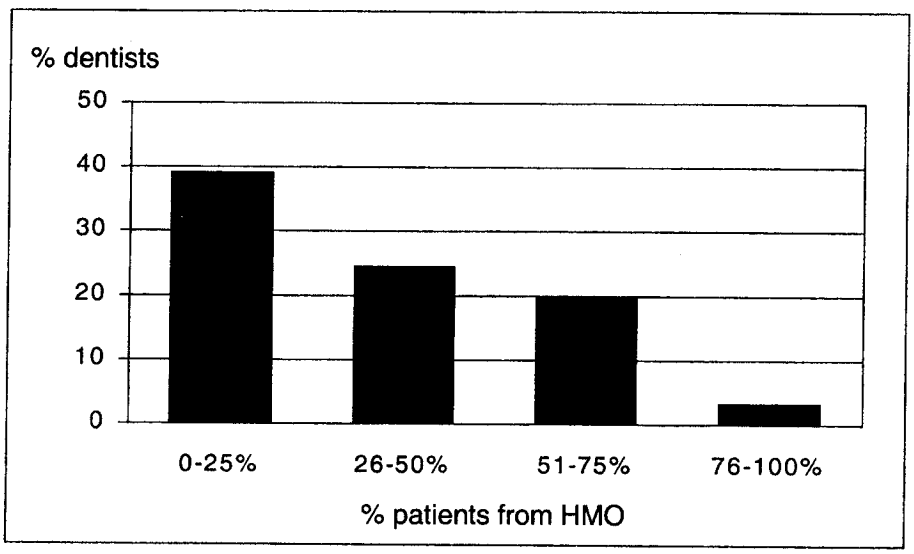
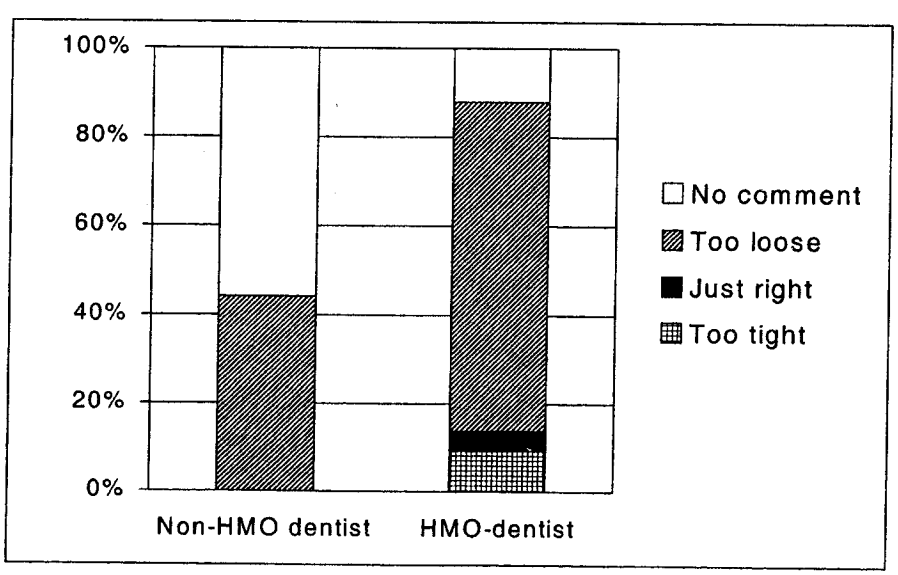
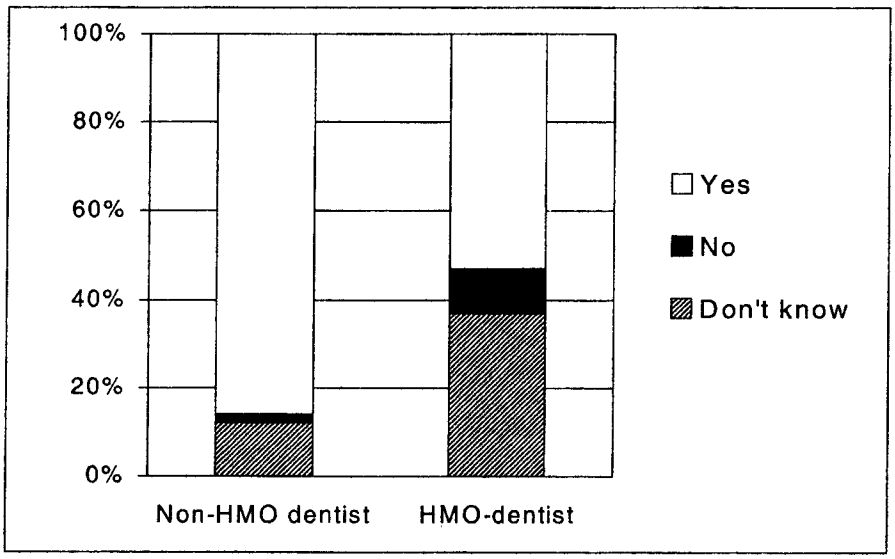


Fig.3 Opinions of the dentists on the existing regulations on HMO



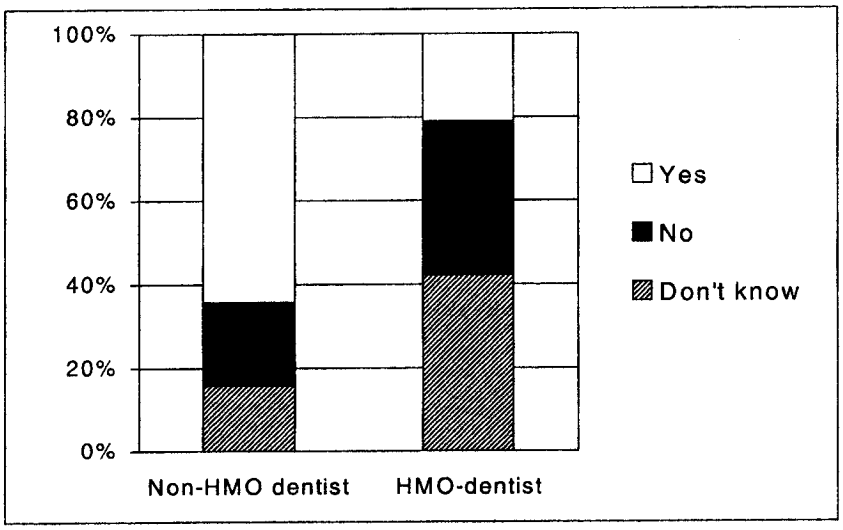
There was a difference in opinion between the HMO-dentists and non-HMO-dentists respondents regarding the present regulations on HMOs in Hong Kong (Fig 3). While 85% of the non-HMO-dentists thought that they were too loose, only 37% of HMO-dentists shared the same view. 10% of the HMO-dentists actually thought that the present regulations were too tight but this opinion was not held by any of the non-HMO-dentists.

Fig.4 Opinions of the dentists on whether the HKDC should tighten the rules



The two groups of dentists also differed in their opinions on the role of the Hong Kong Dental Council (HKDC) and that of the government. While 85% of the non-HMO-dentists thought that the HKDC should be more active in monitoring the growth and operation of HMOs, only half of the supported this move (Fig. 4). The reasons given by the dentists for a tightening of rules included maintenance of a reasonable standard of quality care, better patient protection, maintenance of fair competition especially in relation to canvassing and advertising.

Fig.5 Opinions of the dentists on whether the government should be more active



Most of the non-HMO-dentists but few of the HMO-dentists would like the Hong Kong Government to take part in monitoring the HMOs. In fact, one-third of the HMO-dentists was against government involvement (Fig 5). Some proposers thought that the HKDC was not empowered to control HMOs and so the government should take steps to tighten the law and regulations to ensure that HMOs operate ethnically. For the dentists who were against government involvement, they stressed that a free market should be maintained and professional autonomy should be upheld. Therefore involvement of the HKDC alone should be sufficient.

Regarding whether HMOs were beneficial to the Hong Kong public, the two groups of dentists held very different views (Fig. 6). Most of the non-HMO-dentists held a negative view but more than half of the HMO-dentists believed that HMOs were beneficial. Over 80% of the non-HMO-dentists thought that HMOs were not good to the dental profession (Fig. 7). It was interesting to find that 40% of the HMO-dentists also shared this view.

Fig.6 Opinions of the dentists on whether HMO is beneficial to the people in Hong Kong

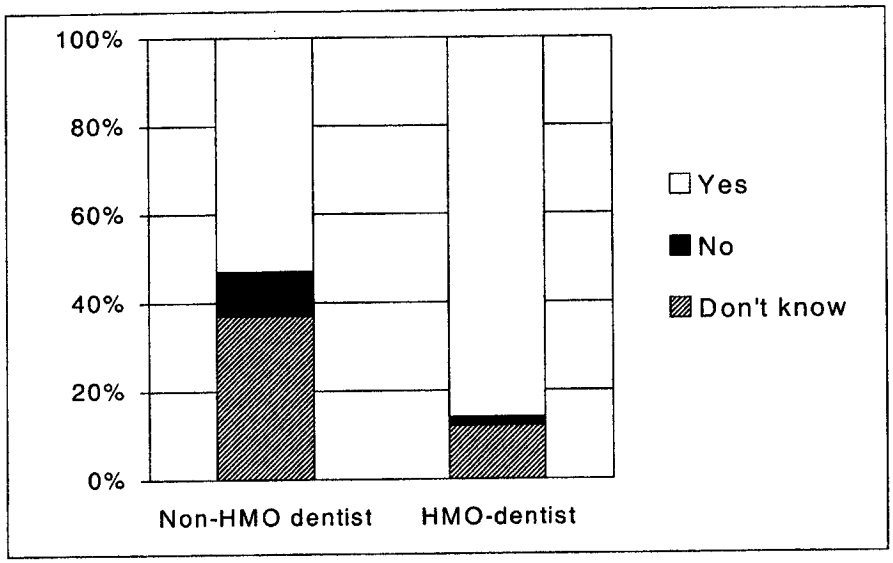
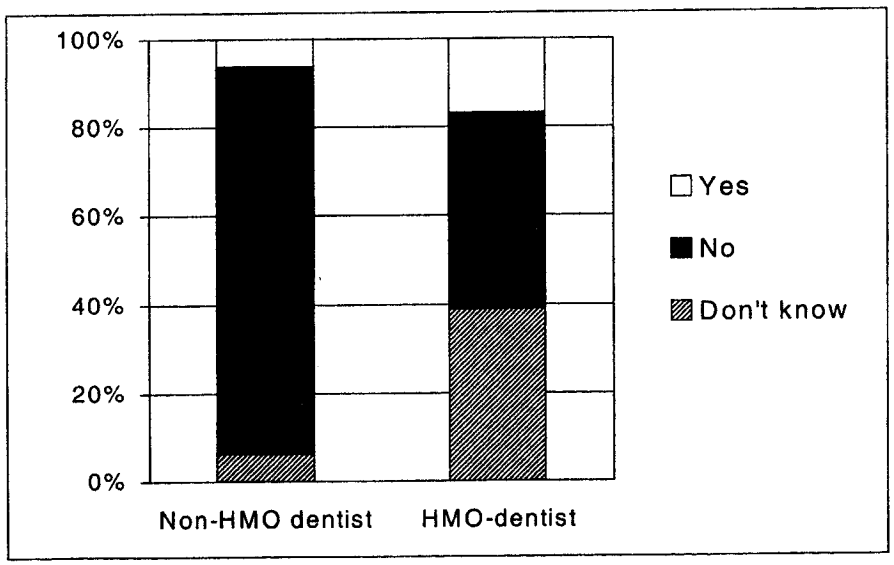


Fig.7 Opinions of the dentists on whether HMO is beneficial to the dental profession

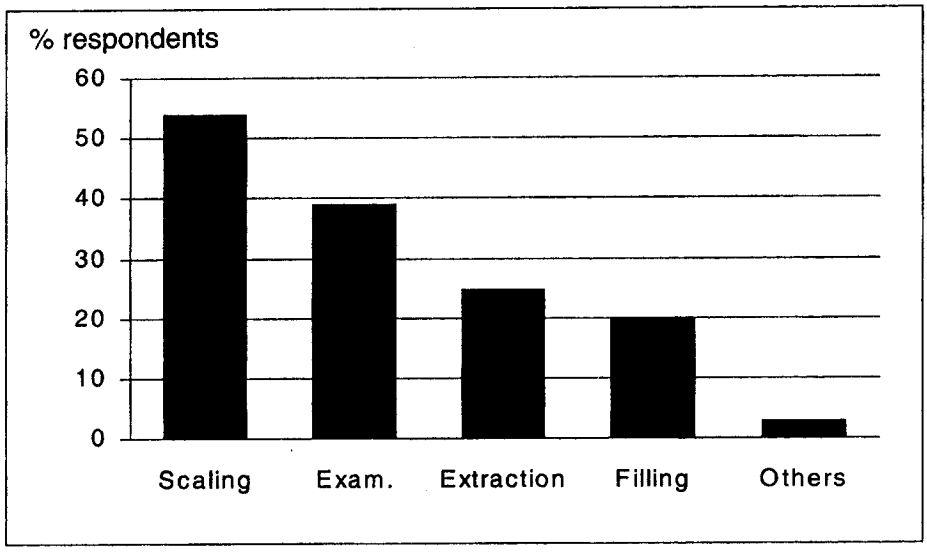


5.4. Survey of the consumers

A total of 115 questionnaires were sent out and 90 completed questionnaires were returned. Thus, the response rate was 78.3%. About 60% of the respondents had at least secondary school level education.

About 80% of the respondents knew that their company provided them with a dental benefit plan. Close to half of these respondents, 47%, thought that the coverage of their dental plan was inadequate and more dental treatment items, e.g. removal of wisdom teeth, should be included. Most of these respondents, 78%, had made use of their dental plan and the following results were from these dental service users.

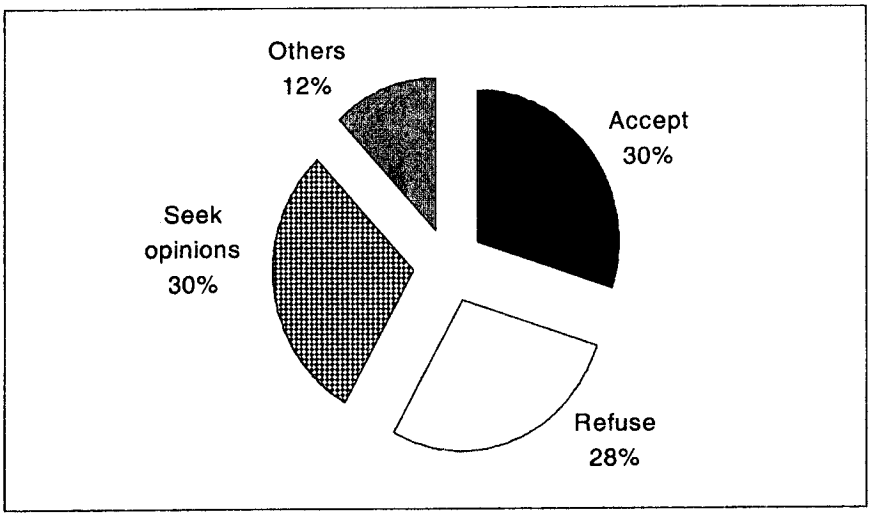
Fig. 8 Types of treatment received by the consumers when they used their dental plan



Besides dental check-up, more than half of the respondents had received scaling, 20% had received fillings and 25% had teeth extracted by the dentists in the dental plan (Fig. 8). Most of the respondents had good experiences with the care they received. The main complaints were long waiting time for an appointment and in the waiting room. Slightly more than one-third of the respondents thought that the waiting time for obtaining an appointment was too long, and 23% of them usually had to spend more than 30 minutes in the waiting

room before they were seen by a dentist. About two-thirds of the respondents replied that their dentist spent more than half an hour on their treatment.

Fig. 9 Response of the consumers if their dentist suggest treatments outside their plan coverage



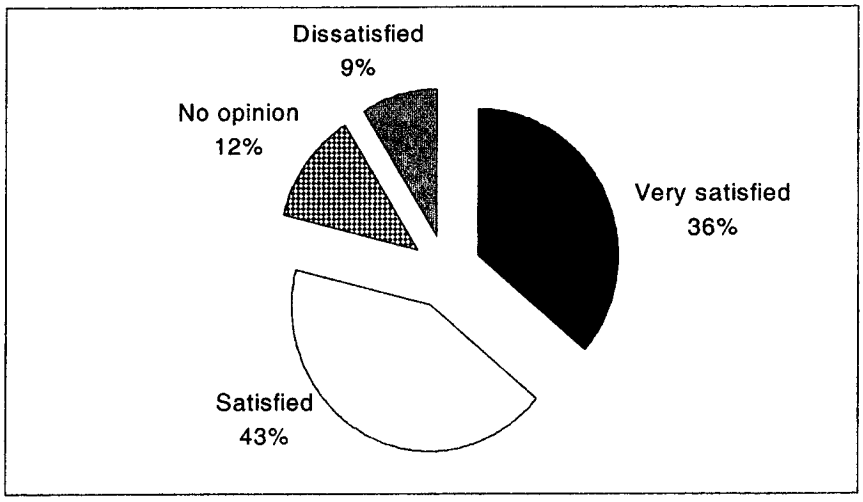
When asked what they would do if their dentist suggested that they need a treatment which was outside their dental plan, only 30% of the respondents said they would accept and pay for the treatment, 28% of them would refuse and 30% would seek a second opinion (Fig. 9). It was found that most of the survey respondents were not royal patients of their dentist. Less than half of the respondents would see the same dentist when they sought care and only 30% of them would seek care from their present dentist if they were no longer covered by their dental plan.

Most of the respondents, 71%, expected that the quality of dental care provided in their dental plan was the same as that provided in any private dental clinic. Only 12% of them thought it would be worse.

Most of the respondents, 60%, replied that they had visited a dentist more frequently after they joined the dental plan. The proportion of respondents having regular dental check-up also increased from 45% to 62% after they joined their dental plan. Besides developing better dental visit behaviour, half of the respondents indicated that their oral health

knowledge had become better and more than half of them, 54%, thought that their oral health status had improved after joining the dental plan.

Fig. 10 Consumer satisfaction with their dental plan



On the whole, about 80% of the respondents were very satisfied or satisfied with the dental services they received and 62% of them opined that this kind of dental plan worth promoting.

6. DISCUSSION

Contrary to our expectation, a generally accepted definition of managed health care or health maintenance organization (HMO) could not be found in the literature although there were a number of articles describing the operation of various health care plans. This lack of definition confuses the situation and makes communication between different parties and persons difficult.

Great difficulties in obtaining information about dental managed care schemes in Hong Kong were encountered in this study. The dentists we approached seemed to be quite reluctant in providing information and in expressing their views on this issue. Similar attitudes were held by the management of the dental companies. In fact, only one out of the five dental companies responded to our request for an interview. This may be related to the companies' policies which classified most of the information as "commercial secret".

Due to limitations of time and resources, it was not possible to carry out a large-scale random survey of private dentists in Hong Kong in this study. The sample in this study was a purposive sample and great caution needs to be taken when inferring the present findings to the general dentist population. To ensure that both dentists associated with and not associated with HMOs were surveyed, some dentists with known status were selected. However, separate response rates for the two groups of dentists could not be calculated because many of the selected dentists were of unknown status. The overall response rate of 58% in this questionnaire survey is similar to and even better than other recent surveys on Hong Kong dentists (Faculty of Dentistry 2000, Lo 2000).

It is not surprising to find that the two groups of dentists held different views on managed care schemes and the need to tighten the regulations on HMOs in Hong Kong. The non-HMO-dentists in this survey held a rather negative attitude towards HMO as most of them thought that it was not beneficial to the public or to the dental profession. They also indicated that the existing regulations on HMO were too loose and that the HKDC and the government should play a more active role in monitoring the HMO. The HMO-dentists on the other hand held a contrary view. The above findings were quite different to that found in a recent nation-wide survey of dentists in the U.S.A. (Bramson et al. 1998). In that survey it

was found that the opinions of both groups dentists, i.e. dentists involved or not involved with managed care schemes, were similar and that the vast majority did not think that managed care plans were good complement to their dental practice or were in the best interest of the patients.

Some dentists in Hong Kong challenge the quality of dental service delivered in the dental managed care schemes and claim that this has caused an increase in patient complaints against dentists, thus damaging the profession's image. However, these charges lack evidence and results of the consumer survey in this study show that majority of the consumers were satisfied with their dental plans.

Studies in Hong Kong have shown that the people's utilization of dental services is low and high cost is one of the reasons given for not seeking dental care (Schwarz & Lo 1994). The dental companies are offering various dental plans at a reasonable price for the consumers to purchase although the beneficiary are mainly people working in large companies with staff dental benefits schemes. The managed care schemes can at least help some people to have easy access to dental care and improve their oral health condition. This proposition is supported by the findings of the consumer survey in this study.

It may be true that more regulations on dental companies can provide better protection to both the public and the dental profession in Hong Kong. However, Hong Kong is a place where free market economy with minimal government intervention is treasured. Therefore, attention should be paid on how to get the right balance between necessary monitoring and maintaining business freedom. Unnecessary tightening of regulations will seriously disturb the running of the "free market" in Hong Kong. More communications between the dental profession and the dental health care business will help to promote mutual understanding and to reduce conflicts. A working group with representatives from the dental profession, the regulatory body, the health care business sector and the government, can be established in Hong Kong to investigate the need for tightening the regulations on dental managed care schemes. The dental profession can review if the code of professional conduct needs to be revised, particularly on the issues of canvassing, advertising, and third party involvement.

The future development of dental managed care schemes in Hong Kong will be affected by whether there will be more regulations imposed by the Hong Kong Dental

Council or the government. From what has happened in the U.S.A. (Marcus et al. 1995, Brown & Bauer 1998, Clouse 1999) and what is happening in Hong Kong, it can be foreseen that more dental managed care companies will be opened in Hong Kong in the near future. There will be various dental managed care plans on offer because the dental companies will target different dental plans at different consumer groups. There will probably be more intense competition between the dental companies and also between the companies and non-HMO-dentists. Dental treatment charges in the market may become lower which may act as a limiting factor on the growth of dental companies. Some dental companies and maybe some independent dental practices which cannot stand up to the competition will be wiped out or have to merged with others. Most likely, only those dental companies and dental practices which can provide good quality care at a reasonable price can survive and increase their market share. Although this seems a bit harsh to the local dental profession, it can also be viewed as a driving force for continue improvement.

There is a proposal in the recently released government consultation document on health care reform (Health & Welfare Bureau 2000) to establish a mandatory Health Protection Account for all people in Hong Kong and that the money in the account can be used to purchase private dental insurance plans after a person reaches the age of 65 years. This proposal, if adopted, will have a profound effect on the future development of dental managed care schemes in Hong Kong.

All in all, further development of dental managed care companies is the current trend in Hong Kong, no matter we like it or not. From the information we gathered in this study, it seems that the public or the consumers welcome this move. It cannot be denied that these dental plans provide a channel for the public through which they can have easy access to dental care services. The public's dental awareness and also their oral health will probably be improved. However, for many dental care providers, the dental managed care companies are business firms and they are involved in this business like workers in a factory only. Provision of the traditional patient-centered care may be replaced by a business-oriented dental service. Dentist's freedom in clinical practice and professional autonomy may be jeopardized because there are rules in the dental plans which the associated dentists have to follow (Chiodo & Tolle 1999). Thus, it is important that all dentists should make themselves familiarize with this and get involved in shaping the future development of dentistry in Hong Kong.

7. CONCLUSIONS

1. There are a number of dental managed care companies in Hong Kong offering various dental plans to the public. The contents of these plans are similar and they only include simple dental treatments However, different companies have different arrangements with their panel of dentists

2. From the consumer questionnaire survey, it was found that most of the respondents were satisfied with the dental services they received in their dental plan. They also reported an improvement in their dental visit behaviour, oral health knowledge and perceived oral health status after joining their dental plan. From the consumers' point of view, managed care scheme seems to be beneficial and worth promoting.

3. From the limited information obtained, it seems that different views were held by the dentists who were associated with HMO and those who were not regarding whether managed care schemes were beneficial to the public and whether the existing regulations on these schemes were adequate or not. The two groups of dentists also differed in their opinions as to whether the HKDC and the Hong Kong government should play a more active role in monitoring dental managed care companies.

8. RECOMMENDATIONS

1. We recommend that a working group be established in Hong Kong to investigate the need for tightening the regulations on dental managed care schemes. The membership of this working group should include representatives from the dental profession, the regulatory body, the health care business sector and the government.

2. There should be more communications between the dental profession and the companies that offer dental managed care schemes so as to improve mutual understanding and to reduce conflicts.

3. The teaching on the business aspect of dental practice in the BDS curriculum of the University of Hong Kong should be strengthened so that the dental graduates are well prepared to enter into the private sector.

9. ACKNOWLEDGEMENTS

We would like to express our sincerely gratitude to our advisor, Dr. E.C.M. Lo, for his valuable advices and guidance throughout our project. We would also like to thank the following people and companies for giving their opinions and other information concerning dental managed care schemes in Hong Kong.

- All dentists who completed and returned the questionnaire
- Employees from Price Waterhouse Coopers
  Arthur Anderson
  Shangri-La Hotels
  Cathy Pacific Airways
  Mazda Motors
  Grand Stanford Hotels
- Health and Care Dental Clinic Ltd
- Dr. Chau, Dr. Fung, Dr. Ma, Dr. Sun, Dr. L.H. Kei

10. REFERENCES

Bailit H (1999). Dental insurance, managed care and traditional practice. *Journal of American Dental Association* 130: 1721-1727.

Bramson JB, Noskin DE, Ruesch JD (1998). Dentists' views about managed care: summary of a national survey. *Journal of American Dental Association* 129: 107-110.

Brown WT, Bauer JC (1998). What medicine teaches us about managed care. *Dental Economics* 88: 53-55, 86.

Burt BA, Eklund SA (1999). The structure of dental practice. In: *Dentistry, dental practice and the community.* 5th edition. Philadelphia: W.B. Saunders Company, p.71-88.

Call RL (1999). Dental management service organizations. Lessons from medicine. *Journal of American Dental Association* 130: 489-495.

Chiodo GT, Tolle SW (1999). Managed care--serving two masters. *General Dentistry* 47: 132-138.

Clouse HR (1999). The impact of managed care in dentistry. *General Dentistry* 47: 210-216.

Faculty of Dentistry (2000). *Occupational stress in dental practice.* Community health project report series no. 105. Hong Kong: University of Hong Kong.

Gift HC, Andersen RM, Chen M (1997). The principles of organization and models of delivery of oral health care. In: Pine CM (ed) *Community oral health.* Oxford: Wright, p.252-266.

Guay AH (1995). Understanding managed care. *Journal of American Dental Association* 126: 425-433.

Health and Welfare Bureau (2000). *Lifelong investment in health. Consultation document on health care reform.* Hong Kong: Government of Hong Kong SAR.

Hong Kong Dental Council (2000). *Dental Council of Hong Kong annual report 1999.* Hong Kong: Hong Kong Dental Council.

Lo ECM (2000). *Report on the Hong Kong dental practice profile survey 2000.* Hong Kong: Hong Kong Dental Association.

Marcus M, Coulter ID, Freed JR, Atchison KA, Gershen JA, Spolsky VW (1995). Managed care and dentistry: promises and problems. *Journal of American Dental Association* 126: 439-446.

Schwarz E, Lo ECM (1994). Use of dental services by the middle-aged and the elderly in Hong Kong. *Community Dentistry and Oral Epidemiology* 22: 374-380.

Questionnaire for private dentists working with HMO

1. For how many years have you practised dentistry in Hong Kong?

   _____ years

2. For how many years have you worked with dental HMO companies in Hong Kong?

   _____ years

3. How many dental HMO companies are you working with at present?

   _____ companies

4. How were you approached by the HMO companies when they recruited/employed you?

   _____ They approached me by sending me an official invitation letter
   _____ They approached me by making telephone calls
   _____ They approached me by sending a representative to my office
   _____ They approached me via my friend or other third party
   _____ Others, please specify, _____

5. What is the main method used by the dental HMO companies to pay for your service? (Multiple answers are accepted)

   _____ A fixed amount per month/year
   _____ A fixed amount per patient
   _____ A fixed amount per treatment item
   _____ No fixed amount
   _____ Others, please specify, _____

6. After joining dental HMO, is there any change in your income from dental practice?

   _____ increase significantly _____ increase somewhat _____ no difference
   _____ decrease somewhat _____ decrease significantly

7. What percentage of your current patient pool is categorized as HMO patients?

   _____ 0-25% _____ 26-50% _____ 51-75% _____ 76-100%

8. What percentage of your clinical time is spent on treating HMO patients?

   _____ 0-25% _____ 26-50% _____ 51-75% _____ 76-100%

9. Which type of dental treatment do your HMO patients usually required?

   _____ dental check-up only
   _____ scaling
   _____ simple restorations
   _____ others, please specify _____

Please continue with Q.10 on the other side

10. Which group of patients do you think is better?

_____ HMO patients _____ non-HMO patients _____ no difference

11. After joining the HMO, do you find any changes in your job satisfaction?

_____ yes, better _____ yes, worse _____ no change

12. What is your opinion on the dental HMO's payment to the dentists?

_____ very generous _____ fair / just right _____ too mean

13. What do you think about the present regulation of dental HMO in Hong Kong?

_____ Too much/tight _____ Just right _____ Too little/loose
_____ No comment

14. Should the Hong Kong Dental Council be more active in monitoring the growth and running of dental HMO?

_____ Yes, reasons _____
_____ No, reasons _____
_____ Don't know

15. Should the H. K. Government be involved in monitoring the running of dental HMO?

_____ Yes, reasons _____
_____ No, reasons _____
_____ Don't know

16. Do you agree that dental HMO is beneficial to the people in Hong Kong?

_____ Yes _____ No _____ No comment

17. Do you agree that dental HMO is beneficial to the Hong Kong dental profession?

_____ Yes _____ No _____ No comment

18. If you have other opinions or information on HMO, please write down in the space below

_____

_____

_____

_____

Thank you

Please put the completed questionnaire in the return envelope and send it to us by mail

Questionnaire for private dentists not involved in HMO

1. For how many years have you practised dentistry in Hong Kong?

   _____ years

2. Have you ever heard about HMO (Health Maintenance Organisation)?

   _____ Yes _____ No

3. Have you ever been approached by HMO?

   _____ Yes _____ No

4. Can you tell us the reasons why you do not join any HMO?

   _____

   _____

5. Are you involved in any other third party payment scheme?

   _____ Yes, Please specify _____

   _____ No

6. Do you think that there will be a significant increase in the number of patients after a dentist joins dental HMO?

   _____ Yes _____ No _____ Don't know

7. How has the growth of HMO in dentistry in Hong Kong affected your dental practice?

   _____ become better _____ become worse _____ no difference

8. Have you ever thought of adjusting your treatment charges in order to increase your competitiveness in the dental care market?

   _____ Yes _____ No

9. What do you think about the present regulation of dental HMO in Hong Kong?

   _____ Too much/tight _____ Just right _____ Too little/loose

   _____ No comment

Please continue with Q.10 on the other side

10. Should the Hong Kong Dental Council be more active in monitoring the growth and running of dental HMO?

_____ Yes, reasons _____

_____ No, reasons _____

_____ Don't know

11. Should the Hong Kong Government be involved in monitoring the running of dental HMO?

_____ Yes, reasons _____

_____ No, reasons _____

_____ Don't know

12. Do you agree that dental HMO is beneficial to the people in Hong Kong?

_____ Yes _____ No _____ No comment

13. Do you agree that dental HMO is beneficial to the Hong Kong dental profession?

_____ Yes _____ No _____ No comment

14. Do you think you will consider joining dental HMO in the future?

_____ Yes, reasons _____

_____ No, reasons _____

_____ Don't know

15. If you have other opinions or information on HMO, please write down in the space below

_____

_____

_____

_____

Thank you for your opinions

Please put the completed questionnaire in the return envelope and send it to us by mail

THE UNIVERSITY OF HONG KONG

Faculty of Dentistry

The Prince Philip Dental Hospital,
34 Hospital Road, Hong Kong.
Telephone: 2859 0341
Fax: (852) 2517 0544

香港大學牙醫學院〔公司牙科保健計劃調查〕

消費者問卷

1. 你的教育程度是：
   □小學程度 □中學程度 □專上學院 □大學學位

2. 你的公司有沒有向你提供牙科醫療保健福利？
   □有
   □沒有〔不用回答下列問題，請交回問卷，謝謝！〕
   □不知道〔不用回答下列問題，請交回問卷，謝謝！〕

3. 你覺得你公司的牙科保健計劃所包括的項目足夠嗎？
   □足夠 □不足夠 □不知道包括那些項目

4. 你有沒有享用過你公司提供的牙科醫療保健服務？
   □有
   □沒有〔不用回答下列問題，請交回問卷，謝謝！〕

5. 你預約此保健計劃的牙科醫生時，是不是覺得時間排得太久？
   □是 □不是

6. 你每次去看保健計劃的牙醫時，通常需要在候診室等候多久？
   □0~15 分鐘 □15~30 分鐘 □30 分鐘以上

7. 你每次接受計劃內的牙科治療時間通常是：
   □少於 15 分鐘 □15~30 分鐘 □30~45 分鐘 □45 分鐘以上

8. 當你用公司的牙科保健計劃時，你通常是接受何種治療？ (可選多項)
   □洗牙 □補牙 □脫牙 □檢查牙齒 □其他，請註明_____

9. 如果保健計劃的牙醫告訴你，你需要某項牙科治療，但此治療是在你公司的保健計劃以外，而你需要繳付額外費用，你會如何處理？
   □接受該項治療并且繳付所需費用
   □拒絕接受該項治療
   □去看其他牙醫，詢問專業意見後，再作決定
   □其他，請註明：_____

請續答背頁第 10 至 20 題

10. 你是不是每次都看同一個保健計劃內的牙醫？
□是　　□不是

11. 如果將來你退出這個保健計劃，當你需要牙科服務時，你會不會去看你現有保健計劃內的牙醫？
□會　　□不會　　□不知道

12. 整體來說，你滿不滿意你在保健計劃內接受過的牙科治療？
□非常滿意　□滿意　□不滿意　□非常不滿意　□無意見

13. 你對現時保健計劃的牙科服務有那些地方不滿：_____
_____

14. 你對公司牙科保健計劃服務的期望和要求，是不是和對一般私人牙科診所服務一樣？
□是
□不是，計劃內的服務應比一般診所更好
□不是，計劃內的服務應比一般診所差

15. 你現在有沒有定期去看牙醫？
□有　　□沒有

16. 在參加公司保健計劃之前，你有沒有定期去看牙醫？
□有　　□沒有

17. 你每年去看牙醫的次數，有沒有因爲你參加了公司的牙科保健計劃而有所增加？
□有　　□沒有

18. 你的口腔健康知識，有沒有因爲你參加了公司的牙科保健計劃而有所提高？
□有　　□沒有

19. 在你加入了公司的牙科保健計劃後，你的口腔健康狀況有沒有改變？
□有改善　　□跟以前一樣　　□更差

20. 總括來說，你認爲這種牙科保健計劃值不值得推廣？
□值得　　□不值得　　□無意見

~ 問卷完 ~
多謝合作！

Examples of various dental plans provided by different dental companies

Company A	Company B		Company C	
Plan	Plan A	Plan B	Plan 1	Plan 2
Scaling (up to 2 times)	Scaling & polishing (once)	Scaling & polishing (up to 2 times)	Scaling & polishing (up to 2 times)	Scaling & polishing (once)
Oral check-up	Oral check-up and OHI	Oral check-up and OHI	Oral check-up and OHI	Oral check-up and OHI
Fillings for treating caries (amalgam for posterior teeth & composite for anterior)	Fillings for treating caries (amalgam for posterior & composite for anterior)	Fillings for treating caries (amalgam for posterior teeth & composite for anterior)	Restore carious teeth	Restore carious teeth (maximum 2 teeth)
X-rays	Intra-oral x-rays	Intra-oral x-rays	Intra-oral x-rays (up to 2)	Intra-oral x-rays (up to 2)
Simple extractions	Simple extractions	Simple extractions	Simple extractions (excluding wisdom teeth and for orthodontic tx)	Simple extractions (up to 2 and not wisdom teeth or for orthodontic tx)
Emergency treatment • Temporary filling • Dressing • Pain relief • Heamostasis, • Recementation of dislodged crown and bridge	Emergency treatment • Temporary filling • Dressing • Pain relief • Drainage of abscess (without surgery)	Emergency treatment • Temporary filling • Dressing • Pain relief • Drainage of abscess (without surgery)	Emergency treatment • Temporary filling • Dressing • Pain relief • Drainage of abscess (without surgery)	Emergency treatment • Temporary filling • Dressing • Pain relief • Drainage of abscess (without surgery)
$ 400 per year	$288 per year	$388 per year	$450 per year	$400 per year

Appendix 4